Population Ecology Lesson

1. Using the table provided, find the interactions between the species from Isle Royale.
2. Using a Word document, create a model that shows interactions in the Isle Royale environment. Include the sun and water along with all the plants and animals. Use the colors specified below. Neatness counts!
   1. In the table provided, identify its trophic level (producer, primary consumer, secondary consumer, tertiary consumer)
   2. Lines/arrows that demonstrate a relationship between an abiotic factor and a biotic factor should be in **red**.
   3. Lines/arrows that demonstrate an herbivore consuming a producer should be in **green**.
   4. Lines/arrows that demonstrate a predator/prey relationship should be in **orange**.
   5. Lines/arrows that demonstrate a mutualistic relationship should be in **purple**.
   6. Lines/arrows that demonstrate a commensalism relationship should be in **blue**.
   7. Lines/arrows that demonstrate a parasitic relationship should be in **yellow**.
3. Use your model along with the pictures on Blackboard to determine what potential limiting factors exist on Isle Royale. List these on the next page of your Word document.
4. Next, think of what adaptations some of the organisms on Isle Royale may have developed to compensate for these limiting factors. Record your response on your Word document.
5. **The moose and the wolf**
   1. Create two separate graphs.
      1. Create one graph using the wolf and moose population numbers.
      2. Create another graph using the predation rate numbers.
   2. Look in your lab book for your analysis questions. Answer all questions in your Word document.